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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,141	01/16/2002	Tetsuo Yamaguchi	2870-0177P	3642

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EXAMINER	
CHEA, THORL	

ART UNIT	PAPER NUMBER
1752	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/046,141	YAMAGUCHI, TETSUO	
	Examiner	Art Unit	
	Thorl Chea	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The use of the term "compounds" in claim 1 in (i), (ii), (iii) is confused with the term "that has characteristic satisfying at least (i) to (iii). See also claims 2-14 which refer the characteristic (i), (ii), (iii) as compounds. Claims 11-14 refers to compounds (i), (ii), (iii) and (iv). It is understood from the specification and claim 1 that the compound in (iv) consisting of formula 1, 2 and 3 inherently provide the characteristic cited in (i) to (iii). The claiming of the "second compound having formula satisfying (iv)" that has characteristic satisfying at least one of (iii) is unclear whether it intends to include the compound having structure 1, 2 and 3 or the compound having properties that satisfying the property of the compound in (iv). In order to clearly define the claimed invention, the language such as "which comprises at least one compound represented by the compound of formula (I) and at least one compound in (iv) as the compound that (i) produces imagewise a chemical species that can form development initiation point on and in the vicinity of the non-photosensitive silver salt of an organic acid; (ii) that provides increase of developed silver grain density to level of 200-500 % when added in amount of 0.01 mol/mol of silver ; (iii) that provides increase of covering power to a level of 120-1000 % when added in an amount of 0.01 mol/mol of silver , and the compounds in (iv) are represented by formula (1) to

(3).". The language in claims 2-16 should be amended accordingly to be consistent with respect compound of formula in (iv) and the properties thereof. See also the claiming of the compound (i), (ii) (iii) and (iv) in claims 11-14. The claims is confusing since the compound in (iv) should be satisfying the condition in (i), (ii) and (iii).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (Ito) in view of JP11-149136 (JP'136) and Adin et al (Adin).

Ito a photothermographic material containing non-photosensitive silver halide, photosensitive silver halide, reducing agent for silver ions and binder and the compound of formula (1) to (3) claimed in the present claimed invention, and the amount thereof is within $1x10^{-6}$ mol to 1 mol/mol of silver halide. Note to the compound of formula (1) to (3) in column 18 and the amount thereof in column 33, lines 22-25.

The JP'136 discloses a heat-developable material containing non-photosensitive silver halide, photosensitive silver halide, reducing agent for silver ions and binder and the compound exemplified in the present application disclosure which is within the scope of formula (I) claimed in the present invention, and the amount thereof is from $1x10^{-6}$ mol to 1 mole/mol of silver halide. See the compound in column 1 (or Its English equivalent, US Patent No. 6,177,240, in columns 7-24; and in column 26, lines 37-40). This compound is within the scope of formula

(I), which contains nitrogen containing hetererocylic compound, and the functional groups such as $-C0_2M$ which is within the scope of A-B of the formula (I). The compound provide photothermographic material high in Dmax and sensitivity, enhanced enough in contrast, small in photographic performance due to flunctuation of development conditions and superior in effect of restraining dependence on development condition.

Adin discloses a spectrally sensitize within the scope of formula (I) of the claimed invention, and the amount thereof is from $1x10^{-8}$ to $2x10^{-3}$ mol per mol of silver in the emulsion layer. The compound is capable of enhancing both intrinsic sensitivity and the spectrally sensitivity of the silver halide emulsion, and the activity of the compound can be easily varied with substituents to control their speed and fog effects in a manner appropriate to the particular silver halide in which they are used. Note to the compound in column 4, especially lines 26-38 and 55-65, and the amount thereof in column 60, lines 5-18.

The teaching in Ito discloses a photothermographic material containing a compound of formula in (iv) of formula (1) to (3). The properties of the compound inherently meets the conditions (i) to (iii) presented in the claimed invention are considered as inherently associated with the compound of formula (1) to (3) of Ito et al. Ito fails to disclose the compound of formula (I) which however has been known and taught in JP'136 and Adin. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the compound taught in JP'136 to provide the photothermographic material with high in Dmax and sensitivity, enhanced enough in contrast, small in photographic performance due to flunctuation of development conditions and superior in effect of restraining dependence on development condition, or the compound taught in Adin in the material taught in Ito enhance both intrinsic

sensitivity and the spectrally sensitivity of the silver halide emulsion to provide the invention as claimed.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,764,816 (Ohzeki) in view of Ito et al (US Patent No. 6,150,084). The compound of group (iv) has been known as nucleating agent and taught in Ito in column 18, compounds (1), (2), (3). It would have been obvious to the worker of ordinary skill in the art at time the invention was made to use the nucleating agent taught in Ito to improve the image contrast of the material claimed in the '816 patent, and thereby provide an invention as claimed.

Response to Arguments

7. Applicant's arguments filed February 9, 2006 have been fully considered but they are not persuasive for the reason set forth in the rejection above. The present invention is related to the system of nucleating having the compound of formula (I) and at least the compound of formula (1) to (3). The compound of formula (I) is a known nucleating agent taught in JP'136 (or

Yamada et al, US Patent No. 6,177,240) and the compound of formula (1) to (3) has been known as nucleating taught in Ito et al (US Patent No. 6,150,084). The worker of ordinary skill in the art would have expected to use the nucleating agent singly or the combination thereof with an expectation of achieving good results. The nucleating agent of formula (I) taught in JP'136 has an improved nucleating property when comparing with known nucleating agent such as hydrazine which is known equivalent to the compound of formula (1) to (3). The applicants is referred to Table 10 in column 54 of Yamada et al wherein the samples 2-6 to 2-12 which contains the compound of formula (I) of the claimed invention has an improved photographic properties in comparing with hydrazine in samples 2-2 to 2-5 in term of gamma and reduction in sensitivity. Moreover, the compound taught in JP'136 provide a photothermographic material with high Dmax, high sensitivity, satisfactory contrast and minimal dependency of photographic properties on developing condition.

The applicants relied on the unexpected properties shown in the Declaration submitted on July 12, 2004. Upon careful review the applicants'argument and the Declaration, it is believed that the Declaration is insufficient to overcome the prima facie case of obviousness rejection. The Declaration on July 22, 2004 shows that the amount of the compound 95 of JP'136 and the compound taught in Ito'084 or he combination of the compound of JP'136 and the compound taught in Ito'084 are different. The amount of Ito'084 compound is 4.5 $x10^{-3}$ mole/mol of Ag and the compound of formula (I) is 0.001 g/mole of Ag. Therefore, it is improper to compare the samples A-1 to A-10 when the amount of each nucleating agent and the combination thereof are different. It cannot determine whether the results shown therein derive from the combination of

the compound or the amount thereof. Accordingly, it is believed that the invention as claimed is still prima facie obvious to the worker of ordinary skill in the art.

The rejection under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,764,816 (Ohzeki) in view of Ito et al (US Patent No. 6,150,084) is maintained for failing to providing a terminal disclaimer to obviate the rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tchea tfn
2006-04-26

Thorl Chea
Primary Examiner
Art Unit 1752